



Queensland University of Technology
Brisbane Australia

This is the author's version of a work that was submitted/accepted for publication in the following source:

Venkatachalam, Nagarajan, Fielt, Erwin, Rosemann, Michael, & Mathews, Shane (2013) Software as a service (SaaS) for small and medium enterprises (SMEs) : the role of intermediaries. In *Proceedings of the 24th Australasian Conference on Information Systems (ACIS 2013)*, Melbourne, Australia.

This file was downloaded from: <http://eprints.qut.edu.au/65201/>

© Copyright 2013 Venkatachalam, Fielt, Rosemann and Mathews

The authors assign to ACIS and educational and nonprofit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a nonexclusive licence to ACIS to publish this document in full in the Conference Papers and Proceedings. Those documents may be published on the World Wide Web, CD-ROM, in printed form, and on mirror sites on the World Wide Web. Any other usage is prohibited without the express permission of the authors.

Notice: *Changes introduced as a result of publishing processes such as copy-editing and formatting may not be reflected in this document. For a definitive version of this work, please refer to the published source:*



Information Systems: Transforming the Future

**24th Australasian Conference on Information
Systems, 4-6 December 2013, Melbourne**

Proudly sponsored by



Software as a Service (SaaS) for Small and Medium Enterprises (SMEs): The Role of Intermediaries

Nagarajan Venkatachalam, Erwin Felt, Michael Rosemann
Information Systems School
Queensland University of Technology
Brisbane, Australia
Email: {venkat.venkatachalam, e.felt, m.rosemann}@qut.edu.au

Shane Mathews
Business School
Queensland University of Technology
Brisbane, Australia
Email: sw.mathews@qut.edu.au

Abstract

*Software as a Service (SaaS) is anticipated to provide significant benefits to small and medium enterprises (SMEs) due to ease of access to high-end applications, 7*24 availability, utility pricing, etc. However, underlying SaaS is the assumption that SMEs will directly interact with the SaaS vendor and use a self-service model. In practice, we see the rise of SaaS intermediaries who support SMEs with using SaaS. This paper reports on an empirical study of the role of intermediaries in terms of how they support SMEs in sourcing and leveraging SaaS for their business. The knowledge contributions of this paper are: (1) the identification and description of the role of SaaS intermediaries and (2) the specification of different roles of SaaS intermediaries, in particular a more basic role with technology orientation and operational alignment perspective and (3) a more added value role with customer orientation and strategic alignment perspective.*

Keywords

SaaS, Software as a Service, SaaS Intermediaries, SME, SaaS Vendors.

INTRODUCTION

The Software as a Service (SaaS) model makes professional and innovative software applications easily accessible via a web browser at attractive prices. Total cost of ownership reduction, speed of deployment, reliability and risk mitigation through insulation from the continuous technology upgrades are identified as some of the key benefits from SaaS (Waters 2005). Small and Medium Enterprises (SMEs) are projected to be the main beneficiaries of SaaS due to its utility pricing model with no or limited upfront capital investments. The ease of access provided by SaaS vendors with 7 * 24 accessibility, 30 day free trials and automated upgrade cycles enables direct subscription of these applications for all its consumers including SMEs.

Though there are significant benefits to be realized from SaaS, SMEs face a set of challenges while sourcing and leveraging SaaS. A recent adoption study of SaaS explained that the SaaS model shifts all customization investments to the consumer side and the consumers are responsible for maintaining all customized components (Xin and Levina 2008). The implications are that SMEs may need development and support skills, if they choose to customize SaaS to fit into their environments. Another recent study of SaaS sourcing by German SMEs reported that integration of SaaS with other applications, loss of control over access to data and data migration complexities as top three challenges for SMEs (Haselmann and Vossen 2011). These findings are in line with past studies on the use of IS by SMEs which highlight the resources and skills constraints which prevent them from fully leveraging the benefits from new technologies (Ada 2009; Palvia 2008; Poon and Swatman 1997). Though SaaS is described as an important technological and business model innovation that brings in new opportunities for small and medium enterprises (Hong et al. 2009), we observe that SMEs encounter significant challenges in terms of leveraging the opportunities from SaaS. Traditionally SMEs access to external IS/IT resources from their trusted networks to overcome the implementation challenges associated with new technologies. But SaaS applications are primarily maintained by SaaS vendors, who may or may not be accessible to SMEs, especially when SMEs are facing some of these challenges. This resulted in our research question "What is the role of intermediaries for SMEs sourcing and leveraging SaaS?" Based on our review of existing IS literature in SaaS and SME IS adoption literature, we observe that there is no empirical analysis that examines the role of intermediaries for SMEs sourcing SaaS. This research aims to bridge this gap with an explorative study of two SaaS intermediary case studies.

The remainder of this paper is organized as follows. We begin with a literature review of SaaS, SMEs, and service intermediaries to highlight the scant knowledge on the role of SaaS intermediaries. Then we explain the research design, which uses multiple case methodology. Next the cases are described and analysed using the business model constructs. Finally, the findings are presented through the discussions of the different roles of SaaS intermediaries. We conclude the paper with knowledge contributions to intermediary theories and real world SMEs using SaaS, limitations and topics for future research.

LITERATURE REVIEW

Small and Medium Enterprises (SME)

Small business are actively trading business with 0–19 employees and medium-sized business are actively trading business with 20–199 employees; SMEs contributed to 57% of private industry value added in addition to employing 4.8 million people during 2009-10 (ABS 2011). Though the importance of SMEs and their economic contributions are well established, traditionally resource & capability limitations have limited them from capitalizing the opportunities from IS/IT innovations (Mehrtens et al. 2001; Ramdani et al. 2009). An E-commerce adoption study identified that financial, technical and managerial resource constraints as the main barriers for SMEs (Lin et al. 2007). Cost, lack of time, skills and knowledge are identified as uppermost barriers for SMEs adoption of new technologies (Heenetigala and Armstrong 2009). Lack of awareness of potential of ICT into their business operations, perception of unresolved security and privacy issues associated with the use of internet, high set up costs and limited skill were reported as barriers for SME's adoption of e-business technologies (Taylor and Murphy 2004). Also compared with the large enterprises, SMEs have only implicit and undocumented business strategies which are mostly focus on cost efficiencies (Ballintine et al. 1998; Hagmann and McCahon 1993). Also their information technology expertise is only limited towards the operationalization of those implicit strategies (Ballintine et al. 1998; Levy and Powell 2000). SaaS model is described as a potential solution for SMEs to address some of these traditional technology oriented challenges since SaaS model shifts the development, deployment and maintenance of applications to SaaS vendors (Hong et al. 2009). The next section presents the current knowledge on SaaS, opportunities as well as the challenges originating from SaaS for SMEs.

Software as a Service (SaaS)

SaaS is defined as “the Software as a Service (SaaS) model, the application, or service, is deployed from a centralised data centre across a network, providing access and use on a recurring fee basis” (Hoch et al. 2001). SaaS is also conceptualized as a) an open market place for software services b) dynamic provision of software for changing user demands, c) services supply network where service vendor may sub contract to provide their services and d) delivery transparency to its users whose main interest is its use (Gold et al. 2004). SaaS is also described as an important technological and business model innovation to bring in new opportunities for Small and medium enterprises (Hong et al. 2009). Total cost of ownership reduction, speed of deployment, reliability, data security, data safety & disaster recovery, risk mitigation through insulation from the continuous technology upgrades are cited as some of the key benefits of the SaaS model (Waters 2005). A McKinsey study on SaaS highlighted that more frequent as well as less painful software upgrades, a lower cost of ownership and higher service levels as key advantages of SaaS (Dubey and Wagle 2007). Also the technology perspectives based research identified the virtualization, service eco systems and elasticity of cloud infrastructure as the drivers for significance of SaaS (Barros and Dumas 2006; Sushil et al. 2010). These benefits provide certain opportunities for SMEs to overcome their traditional IS/IT resource and capability constraints. The SaaS model solves the provider side customisation deficiencies of the Application Service Provider (ASP) model with the multi-tenant architecture and shifts the customization effort to the customer side of SaaS (Xin and Levina 2008). A recent German study on the SaaS adoption by SMEs concluded that SaaS is not expected to be the revolution in business for SMEs in the near future but declared that SaaS is an important concept in the IS/IT architecture of these enterprises (Haselmann and Vossen 2011). Gartner (2012) observed that only few SaaS applications have reached maturity compared to most of the SaaS applications which are still far away from mainstream adoption. These observations highlight the challenges associated with using SaaS for SME consumers.

Service Intermediaries

Intermediaries bring customers and suppliers together and facilitate demand and supply activities. Intermediaries solve customers' problems and, as a result, suppliers' problems. Their position on the high ground between both groups enables them to create value and charge for it (Anderson & Anderson, 2002). Intermediaries provide value-added services such as aggregation and distribution of products and product information, quality checks and warranties (Chircu & Kauffman, 2000). Intermediaries can perform different roles, for example, they can

perform basic market functions, provide management support for sourcing or serve as technology adapters (Dai & Kauffman, 2002b). The servitization of the software industry via SaaS and Cloud results in services-oriented systems. Intermediaries can be seen as part of a value chain service system and as separate service systems themselves (Alt et al. 2010). Bardhan et al. (2010) outlined how services-oriented systems will act as a disruptive technological innovation and emphasized the different roles of service producers (e.g., Salesforce, Google), consumers (e.g., SME), service intermediaries (Resellers) and service monitors (Governments and standard bodies). While there is little attention for SaaS intermediaries so far, intermediaries have been discussed in the wider context of the cloud ecosystem. Recent literature identifies the application, platform, infrastructure provider roles, integrator, consultant, aggregator and consumer roles are identified as part of the cloud service eco-system (Böhm et al. 2010). Leimeister et al. (2010) identified integrators, consultants and brokers as value adding participants within a cloud ecosystem.

RESEARCH DESIGN

SaaS is a relatively new phenomenon and there is little empirical research on the use of SaaS by SMEs. The notable exception are couple of studies which address the SaaS adoption factors, benefits and challenges (Haselmann and Vossen 2011; Xin and Levina 2008). Moreover, as far as we know, this is the first empirical study of SaaS intermediaries. Therefore, we opted for an explorative research approach for this study. We used the multiple case study design to investigate the question on the role of SaaS intermediaries for SMEs. Case study methodology (Yin 1994) is proposed as one of the best options for conducting explorative studies when there is hardly any prior research on the topic. Also the multiple case studies are preferred over the single case study due to the vulnerability of single case study and associated criticism with generalisation of the results as well as for extension of the existing theories (Benbasat et al. 1987; Yin 2009).

Two SaaS intermediaries were selected based on their a) service focus on SMEs b) their value added services for market leading SaaS products c) their credentials in the market place and d) availability of key stakeholders for the interviews and subsequent clarifications. Semi structured, face to face interviews were conducted with the representatives from both firms. The interviews were conducted with owner for case 1 and the Managing Director was interviewed for case 2. The duration of interviews was between 60 to 90 minutes. Contact summary forms (Miles and Huberman 1984) were completed to record the first observations as well as capture main themes from these interviews. The same was also used by the researcher to verify that all required data was collected. In addition to this, the information from the two companies' websites was also used to gather data on partnerships and details of the value added services provided by both intermediaries. Follow up clarifications were completed with via emails & phone calls to gather supporting data artefacts (Example: SaaS release documentations). Interviews transcriptions were sent to participants review for verification and their comments. The researcher also attended two local Salesforce user group meetings conducted by owner of intermediary 1. This allowed the researcher to observe the interactions between SaaS intermediary 1 and the participant SMEs. The tool NVIVO was used for the coding and analysis of collected data through the open coding as well as descriptive, interpretive coding & analytical processes.

Based on a first summary of the data from both cases, we decided that the best way to holistically present the role of the SaaS intermediary would be by means of their business model. A business model describes and analyses how organizations create (and capture) customer value (Chesbrough and Rosenbloom 2002). More specifically, we adopted the Business Model Canvas (Osterwalder et al. 2010) as this has become one of the most applied frameworks by both academics and practitioners. The Business Model Canvas consists of nine 'building blocks:' (1) an organization serves one or several Customer Segments, (2) it seeks to solve customer problems and satisfy customer needs with Value Propositions, (3) Value Propositions are delivered to customers through communication, distribution, and sales Channels, (4) Customer Relationships are established and maintained with each Customer Segment, (5) Revenue Streams result from Value Propositions successfully offered to Customer Segments, (6) Key Resources are the assets required to offer and deliver the previously described elements, (7) performing of a number of Key Activities, (8) some activities are outsourced and some resources are acquired outside the enterprise via Key Partnerships, and (9) the business model elements result in the Cost Structure.

CASE DESCRIPTIONS

In this section we will describe both SaaS intermediaries' case studies in detail. A summarized overview of the intermediaries is presented in table 1 based on the business model building blocks.

SaaS Intermediary 1

The first intermediary case is based in Brisbane and provides niche set of services as part of the Salesforce "ecosystem". Intermediary 1 provides consulting, integration and support services for their SME customers. The firm is in business for 3.5 years and serviced around 100+ emerging SME customers i.e. SMEs that are moving

from a micro to small size firms. Their key resources are the authenticated Salesforce expertise of their matured workforce and the local access to global knowledge for their SME customers. The owner's statement "*our unique selling point is our experience, our qualifications; we are certified. We definitely promote ourselves as being local to Brisbane*" summarizes their resources & capabilities. The firm employs three certified Salesforce consultants with access to global development resources. The firm operates project based short duration contracts for customer specific requirements. Their potential customers originate through referrals and call them with specific requests like establishing a contact database. The owner goes through requirements gathering discussions with the prospect. Part of this process he increases the customer's awareness regarding the opportunities with Salesforce CRM and associated service offerings. This intermediary has established partnerships with complimentary capabilities from the Salesforce ecosystem service providers (Ex: Nimbus, RadienScore). These partnerships enable access to a wide range of Salesforce related knowledge and solutions that are relevant to their customers' specific situations.

The owner is also facilitator of Brisbane Salesforce user group meetings where he and his team share the knowledge about best practices in using Salesforce. These knowledge sharing sessions cover a range of topics including discussions Salesforce upgrade specific idiosyncrasies, question and answer sessions and demonstrations of complimentary services that are part of Salesforce eco system. These forums and knowledge sharing sessions can potentially identify prospective customers for this intermediary.

SaaS Intermediary 2

This intermediary firm is based in Brisbane and active for more than a decade. This firm offers a 'full service cloud' product which essentially gives an integrated package of all three cloud based services namely Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and SaaS. This is aimed at the SMEs with no or very limited IS capabilities. For firms with in-house IS capabilities, this intermediary offers specific advisory services towards their SaaS selection and implementation activities. Their SaaS based value propositions are a) providing advisory services on SaaS product selection, b) customization of standard SaaS applications to align with the customers' specific environment situations, and c) provide best fit solutions by combining a specific set of service options to match their customers' process specific implementation. In 2013, this intermediary had a total of 79 customers out of which 67 belong to small and medium enterprise category.

This intermediary conducts a one or two day workshops with all key stakeholders of their customer firm to get a complete understanding of their current position in the market place, their strategic goals and financial capabilities. The intermediary provides a "SaaS roadmap" for their customers along with implementation options to choose after a structured analysis of the information collected in the workshops. The options include the choice of SaaS products, customized components with SaaS platform and/or off the shelf packages based on the customer's specific needs. The firm has established partnerships with leading SaaS providers including Microsoft, Google and Salesforce. It is owned and managed by an entrepreneurial managing director who has a track record of creating multiple IT services firms. The contractual relationships tend to be subscription based and long term oriented i.e. 2 or 3 years term. The next section gives a cross case analysis of both intermediaries.

We observe that both intermediaries are demonstrating a strong technology orientated capabilities through a set of common resources (local physical office, consultants and global development resources) and activities (customized development, implementation support, data integration, cleansing and localization). We also observe that these two intermediaries demonstrate some differences in a) their supply relationships (ex: intermediary 1 with Salesforce eco system only versus intermediary established partnerships with vendors of all cloud services), b) customer relationships (Short term project execution versus strategic alignment of SaaS) and c) revenue streams (transaction pricing model versus subscription pricing model).

Table 1. The business models of SaaS intermediaries

Business model element	SaaS Intermediary 1	SaaS Intermediary 2
Customer segments	<ul style="list-style-type: none"> • Micro, Small and medium size firms that are using Salesforce already • Niche market (Salesforce customers only) 	<ul style="list-style-type: none"> • Small, medium and large enterprises as its customers. • Customers from all three cloud based services market
Customer Relationships	<ul style="list-style-type: none"> • Providing personal services • Community services through co-ordination and facilitation of the local user group forums • Demonstrates short term project orientation 	<ul style="list-style-type: none"> • Dedicated Personal service workshops at the customer sites and provision of automated Software and infrastructure services • Community engagements through vendor conferences. • Long term repeat customers orientation

Customer Channels	<ul style="list-style-type: none"> Customers from direct as well as referrals from supply side partnerships 	<ul style="list-style-type: none"> Direct and partnership based channels. Cross selling of services to existing customers.
Value Propositions	<ul style="list-style-type: none"> Increase customer awareness of SaaS based opportunities Knowledge Sharing for best practices with implementation Information sharing of customer specific complimentary services 	<ul style="list-style-type: none"> Provide advisory role to support the customers SaaS purchasing decisions Integrated value offered through combination of services a) Customer specific SaaS solutions b) Platform based customization services c) infrastructure services Troubleshooting of technical issues from customer's own implementations Mandated data cleansing and loading services to ensure clean data for reports Data Sovereignty with local storage
Activities	<ul style="list-style-type: none"> Development, customization, integration and data migration related to Salesforce eco system only Scope of activities address the technology specific needs of the customer (Implementation, support, data migration and back-ups) 	<ul style="list-style-type: none"> Conduct business analysis workshops Development, customization, integration of SaaS, PaaS & IaaS Data cleansing, integration and localization services Activities are aligned towards customer's strategic use of all three cloud services
Key Resources	<ul style="list-style-type: none"> The skills and automation experience of the owner Consultants with certified knowledge in Salesforce Access to global software development resources Limited infrastructure Use cloud based infrastructure services 	<ul style="list-style-type: none"> The skills and entrepreneurial experiences of the managing director. Consultants with technology expertise Access to local and global software development resources Physical and IT Infrastructure Customer specific knowledge from the existing service subscriptions
Partners	<ul style="list-style-type: none"> Partnerships are with Salesforce eco system solution providers only 	<ul style="list-style-type: none"> The partnerships are broader and with all three cloud service vendors
Revenue Streams	<ul style="list-style-type: none"> Transaction based pricing Project duration and services offered to individual customers 	<ul style="list-style-type: none"> Two or three year services subscription model provides revenue predictability
Costs	<ul style="list-style-type: none"> Key cost contributors are from human resources, office space and global development resources 	<ul style="list-style-type: none"> Human resource costs, physical office space, local and global development resources Costs are also from hardware infrastructure & Redundant network connectivity related costs Physical space related costs/

CASE ANALYSIS

The two intermediary case studies provide the explanation on how SaaS Intermediaries are addressing SaaS related challenges namely (1) Limited awareness of SaaS based opportunities (2) Customization of standard SaaS offerings and (3) Adaptation of new and innovative features of SaaS originating from automated upgrade cycles for their SMEs customers. While addressing these challenges the intermediaries demonstrate both technology and customer orientation during mapping of SaaS solutions to SME's needs. Moreover, the offered value propositions from the intermediaries demonstrate operational and strategic alignment of SaaS for SMEs. As the business models of case 1 and 2 shows, both intermediaries bridge the gap between SMEs and SaaS vendors by solving both customers' problems and also suppliers' problems (Anderson & Anderson, 2002). At the demand side, intermediaries address the specific needs of SMEs with technology and customer orientation. At the supply side, intermediaries develop SaaS solutions for specific operational and strategic needs of SMEs.

Technology & Customer Orientation of SaaS

SaaS intermediaries demonstrate technology and customer orientation with their SME engagement process. With technological orientation we explain the intermediaries' activities in their target customer segments that are based upon intermediaries' technology resources. The customer orientation we explain their subsequent actions that are based upon specific SME customers' needs.

The owner of Case 1 intermediary stated that *'we're only interested in people that have already recognised that Salesforce is the platform of choice for them'*. Whereas, the intermediary 2 targets customer segments which are in need of all three type cloud based services, namely infrastructure as a services (IaaS), platform as a service (PaaS) and Software as a service (SaaS). In terms of solutions, the extent of technology orientation varies between these two intermediaries. The intermediary 1 offers niche technology solutions that are based upon the Salesforce eco-system only. The intermediary 2 offers technology solutions that are based upon multiple SaaS (Salesforce, Google) and non SaaS vendors (Amazon & Cisco) for their target customers. The intermediary 1 offers value through the certified Salesforce consultant resources whereas the intermediary 2 demonstrates technology integration expertise to integrate the different type of SaaS and IaaS needs. In essence the technical orientation of intermediaries are based upon their own technology resources & capabilities and defines their specific target customer segments.

Apart from the technical orientation, the intermediaries have customer orientation during the requirements gathering, solution proposal processes to specific SME customers. During the first step both intermediaries engage with their prospects and customers to capture the required SaaS related services. The intermediary 1 educates the customer and increases the customer awareness of potential solutions with Salesforce eco system. The owner explained this process based on call from a prospect, who was enquiring about setting up contact database. The narrated customer problem was *"An email comes in to an email inbox or an Outlook inbox. Well, it's relying on somebody responding to it. How many did we get? We don't know. How many were about, were genuine complaints as opposed to just an enquiry? Don't know because there's no analytics on that"*. He elaborated on his proposed solution through *"but then, whilst there, I was talking about customer services. so well, how do you deal with issues and complaints and email enquiries, and things like that, and that's why we think that customer services in the Service Cloud kicks in nicely"* through which he is offering "service cloud" product of Salesforce as possible solution for the prospect, who was not aware of possibilities with their choice of Salesforce. Such narrations demonstrate how intermediary 1 is oriented towards the gap in their Customer's CRM processes based on their best practices knowledge and also proposed a solution with the "Service Cloud". In case of intermediary 2, the firm conducts one or two day workshops with their customers. Subsequently this intermediary offers a best fit solution to address the specific needs of their customers. The Managing Director observed that *"We are vendor agonistic In terms of helping them decide, this is where we do the stakeholder workshop, because we have done this with couple of clients full workshops and we have realized that hang on a sec, we have been thinking that you need a customized application using force.com but you actually don't. There is an app in Microsoft which you can plug in and use it"* to highlight how they take a vendor agnostic approach towards SaaS for their customers.

To summarize, both intermediaries show technical and customer orientation during their SME engagement processes. The extent of the technical orientation as well as the offered solutions is varied upon the resources and capabilities of individual intermediary.

Operational & Strategic Alignment of SaaS

SaaS intermediaries demonstrate both operational and strategic alignment during the execution of their solutions for their customers. Through operational alignment we explain how intermediaries implement the offered SaaS solutions as part of SME's processes. With strategic alignment, we explain the intermediaries' scope of solutions and contractual arrangements go beyond the operational needs of their SME customers.

Both intermediaries offer the make the SaaS technology work capabilities to their target customers to make SaaS operational within the customers' environment. Since the intermediary case 1 engages with their customers after their Salesforce choice, they support the SME to make the SaaS technology work as part of SME's sales and marketing processes. The intermediary 1 provides the SMES with the knowledge to self-sustain SaaS oriented operations including administration activities with their short term, time and material contracts. The intermediary 2 extends their value with data cleansing and data sovereignty solutions to minimize the operational reporting issues with SaaS. The case 2 MD observed that SMEs *"do not cleanse it thoroughly and reports do not run correctly and then we go and investigate it to find that the field is numeric field and they have alpha characters in it. It is a very common issue; we sort of mandate that (i.e. data conversions)"*. *What tends to happen is that people try to do it themselves, and ends up very very messy. We say to them, you have to let us do that properly. Because rubbish in rubbish out"*. These observations explain how intermediary 2 provides ongoing operational support to SMEs, when they start using SaaS.

Due to their extensive knowledge with Salesforce eco system, the case 1 intermediary provides the best practices knowledge as a strategic value for their customers and prospects. The intermediary 2 completes an extended analysis of customer's requirements through workshops. The managing director described the activities and outcomes of the workshops as *"We basically drill down the entire business with the questions are like how do you actually market your product? How do you sell your product? How do you deliver the product? Or if it is a service, we use product and service interchangeably. How do you make sure that there is no churn,? What is your client loyalty program is? We have a set template that covers we ask all these questions. There are four fundamental platforms for any business, it is all about identifying the strategy, you have the funding to execute on that, where the funding is going to come from, you have the people to implement and the most important thing is what your execution plan is? We cover all four pillars of a business. We are more like a business coach"*. Such investigations enable this intermediary to deliver a SaaS road map that is aligned with that customer's strategic *"aspirations"*. These workshops also enable intermediary 2 to provide best fit solution options aligned with their customers' strategic objectives. Table 2 below outlines the orientation and alignment of SaaS by SaaS Intermediaries.

Table 2 Orientation and Alignment of SaaS

	ORIENTATION		ALIGNMENT	
	Technology Orientation	Customer Orientation	Operational Alignment	Strategic Alignment
Customer segments	Niche Services Market, All cloud services market	Micro, Small, Medium and Large customers	Limited technology related activities and services	Business Coaching, Knowledge sharing through facilitation of user groups
Customer Relationships	Demonstrate Making SaaS Technology Work Capabilities	Demonstrate the Business systems thinking capabilities		
Customer Channels	Referrals	Existing customers, supply networks		
Value Propositions	Customization, Implementation, Data Migration, Conversions, Clean up and back up services,	Evaluation, Business Analysis, Customization, Data Sovereignty, Data cleansing Integrated services	Self-sustainment of technology administration, Error free Reporting	Trusted advisory, Best practices based knowledge, Strategic alignment of SaaS
Activities	Development, Testing, Minor extensions, SaaS Configuration	Identify SaaS customization requirements, Develop SaaS customization components, Configuration, Maintenance	Business Process specific investigations, Process improvement solutions	Conduct upfront workshops to understand the customers strategic goals Provide a SaaS Road Map
Resources	Automation, Certification	Consultant's Knowledge, Local Access		
Partnerships	Technology complementarities	Niche Solution Providers Leading cloud service vendors	Vendor specific	Vendor Agnostic
Revenues			Short Term T&M Contracts	Long term subscription bees contracts
Costs	Development resources		Physical and virtual resources	

CASE DISCUSSION

Based on the insights from SaaS adoptions studies in the literature review and the findings from our case studies, we propose that SaaS intermediates can start addressing SME's implementation challenges based on technology orientation and operational alignment of SaaS. Moreover, our case analysis findings also suggest that SaaS

intermediaries aim to provide added value with their customer orientation and strategic alignment of SaaS based solutions. Figure 1 captures both of these different roles of SaaS intermediaries.

Figure-1: A basic and added value role for SaaS intermediaries



Basic role: Technology Orientation and Operational Alignment

In these findings, we first outline how the intermediaries conduct the technology oriented activities towards the operational alignment of SaaS for their customers. The adoption study of SaaS explained that the SaaS model shifts all customization related to investments to the consumer side and the consumers are also responsible for maintaining all the customized components (Xin and Levina 2008). The empirical analysis of the SaaS sourcing by German SMEs reported that integration of SaaS with other applications, loss of control over access to data and data migration complexities as top three reasons for SMEs not using SaaS (Haselmann and Vossen 2011). Now we will expand how SaaS intermediaries address these challenges. Both SaaS Intermediaries demonstrate certain similarities in their activities, resources and value propositions. These are oriented towards the operational challenges (integration of SaaS with other applications, loss of control over access to data and migration of data) originating from SaaS. Both intermediaries conduct the requirements analysis, solution design and implementation activities for their customers to develop and deliver platform based solutions. These activities enable a customized implementation of SaaS products within the particular SME's operating environment. Both firms also offer data related services through data migration, data cleansing, data integration, data back-up activities. The data related services have the potential to provide SMEs with cleaned up data, keeping the data in local infrastructure and error free reporting benefits. The intermediary case 1 description of their customer engagement reflects the focus operational efficiencies with SaaS implementations. The intermediary case 1 offers self-sustaining behaviour as a value proposition for their customers. Their contracts are also mostly short term, project fees based on the agreed upon scope of technology related activities. However as identified in table 2, few differences in resources, activities, partnerships and revenue streams enable these firm to offer different types of value extensions to their customers.

Added value role: Customer Orientation and Strategic Alignment

Both intermediaries offer services that go beyond the operational alignment of SaaS for their SME customers. SaaS Intermediaries can enable the SMEs to leverage the opportunities from SaaS based on customer oriented and strategic alignment of SaaS solutions. Due to the depth of knowledge capabilities of intermediary 1 with Salesforce, they disseminate their knowledge of best practices to address the customers' futuristic needs for leveraging SaaS based solutions. With intermediary case 2, the upfront workshops enable them to provide their customers and prospects with best fit solutions with specific options based on understanding of their customers' strategic "aspirations". Intermediary 1 has supply side partnerships with other complimentary service providers of Salesforce eco system, which enables them to increase the customer awareness of these options and offer an integrated value proposition from the network of Salesforce vendors. In case of intermediary 2 supply side partnerships are established with all three cloud service providers. This results in the integrated value propositions from full cloud service offerings. Intermediary 2 delivers implementation road map with choice of vendors (Salesforce or Microsoft) as well as alternative implementation processes (customization versus implement a standard plug-ins) due to their extended engagement during evaluation stage of their customers' purchasing process. The subscription fee based multi-year service agreements of intermediary 2 enable them to offer predictability of the SaaS related expenses for their SME customers.

CONCLUSION

In this paper we explored the role of SaaS intermediaries. While SaaS offers potential advantages to SMEs, it can still result in adoption challenges due to the self-service model and the complexity of the corporate software. Therefore, we took a closer look at two SaaS intermediaries to determine the roles they play. We described the intermediaries in detail using a business model template. We identified different approaches in terms of technology and customer orientation of engagements and operational & strategic alignment of the solutions.

Based on these findings we propose that SaaS intermediaries can play a basic role with a technology orientation and operational alignment of SaaS. In addition, SaaS intermediaries can play an added value role with a customer orientation and strategic alignment of SaaS for SMEs. As far as we know this is the first paper that describes SaaS intermediaries in more detail and also identifies the different roles that SaaS intermediaries can play. The details of both of these roles are given below.

- SaaS intermediaries can help overcome the challenges of SME with limited or no technology capabilities resulting from self-service approach enabled by SaaS vendors
- SaaS intermediaries can provide a basic and limited role with a set of technology oriented and operationally aligned value propositions (Configuration, data integration) for their SME customers
- SaaS intermediaries can expand their limited role with a set of customer oriented and strategically aligned value propositions (Business advisory services, knowledge sharing, predictability with multi year subscription pricing) for their SME customers

The knowledge contributions of this paper are: (1) the identification and description of the role of SaaS intermediaries and (2) the specification of different roles of SaaS intermediaries, in particular a more basic role with technology orientation and operational alignment perspective and (3) a more added value role with customer orientation and strategic alignment perspective. As this is an explorative study, there are a number of limitations that need to be taken into account. Use of the limited number of intermediary cases and data collection with only Australia based intermediaries are limiting the generalizability of the findings from this study. Moreover, while the cases focussed on SaaS, one of the cases also included cloud offerings. This makes the cases less comparable. In addition, we propose some directions for future research. Future research can gather data from the SaaS vendor's perspective and SaaS SME consumers' perspectives based upon their experiences with SaaS intermediaries to expand on the interactive nature of intermediary roles. We Future research can also integration the SaaS related intermediary knowledge in relation to cloud literature on service intermediaries.

REFERENCES

- ABS. 2011. "Key Statistics Small Business." p. 4.
- Ada, S. 2009. "Smes' E-Commerce Adoption: Perspectives from Denmark and Australia," *Journal of Enterprise Information Management* (22:1/2), p. 152.
- Alt, R., Abramowicz, W., and Demirkan, H. 2010. "Service-Oriented in Electronic Markets," *Electronic Markets* (20:3-4), 2010/12/01, pp. 177-180.
- Ballintine, J., Levy, M., and Powell, P. 1998. "Evaluating Information Systems in Small and Medium-Sized Enterprises: Issues and Evidence," *European journal of information systems* (7:4), pp. 241-251.
- Bardhan, I., Demirkan, H., Kannan, P., Kauffman, R., and Sougstad, R. 2010. "An Interdisciplinary Perspective on It Services Management and Service Science," *J. Manage. Inf. Syst.* (26:4), pp. 13-64.
- Barros, A., and Dumas, M. 2006. "The Rise of Web Service Ecosystems," *IT Professional* (8:5), pp. 31-37.
- Benbasat, I., Goldstein, D.K., and Mead, M. 1987. "The Case Research Strategy in Studies of Information Systems," *MIS Quarterly* (11:3), pp. 369-386.
- Böhm, M., Koleva, G., Leimeister, S., Riedl, C., and Kremer, H. 2010. "Towards a Generic Value Network for Cloud Computing," in *Economics of Grids, Clouds, Systems, and Services*, J. Altmann and O. Rana (eds.). Springer Berlin Heidelberg, pp. 129-140.
- Chesbrough, H., and Rosenbloom, R.S. 2002. "The Role of the Business Model in Capturing Value from Innovation: Evidence from Xerox Corporation's Technology Spin-Off Companies," *Industrial and Corporate Change* (11:3), June 1, 2002, pp. 529-555.
- Dubey, A., and Wagle, D. 2007. "Delivering Software as a Service," *The McKinsey Quarterly* (6), pp. 1-12.
- Gartner. 2012. "Hype Cycle for Software as a Service, 2012," Gartner.
- Gold, N., Mohan, A., Knight, C., and Munro, M. 2004. "Understanding Service-Oriented Software," *IEEE Software* (21:2), pp. 71-77.
- Hagmann, C., and McCahon, C.S. 1993. "Strategic Information Systems and Competitiveness: Are Firms Ready for an Ist-Driven Competitive Challenge?," *Information & Management* (25:4), pp. 183-192.
- Haselmann, T., and Vossen, G. 2011. "Software-as-a-Service in Small and Medium Enterprises: An Empirical Attitude Assessment," in *Web Information System Engineering – Wise 2011*, A. Bouguettaya, M. Hauswirth and L. Liu (eds.). Springer Berlin / Heidelberg, pp. 43-56.

- Heenetigala, K., and Armstrong, A. 2009. "The Use of Internet Reporting for Small Business 23," *Journal of business Systems, Governance and Ethics* (4:4).
- Hoch, F., Kerr, M., and Griffith, A. 2001. "Software as a Service: Strategic Backgrounder," *Software & Information Industry Association (SIIA)*.
- Hong, C., Ke, Z., Ming Jun, Z., Wei, G., Jun Jie, C., and Xin Sheng, M. 2009. "An End-to-End Methodology and Toolkit for Fine Granularity SaaS-Ization," *Cloud Computing, 2009. CLOUD '09. IEEE International Conference on*, pp. 101-108.
- Leimeister, S., Böhm, M., Riedl, C., and Krcmar, H. 2010. "The Business Perspective of Cloud Computing: Actors, Roles and Value Networks,").
- Levy, M., and Powell, P. 2000. "Information Systems Strategy for Small and Medium Sized Enterprises: An Organisational Perspective," *The Journal of Strategic Information Systems* (9:1), pp. 63-84.
- Lin, C., Huang, Y.A., and Tseng, S.W. 2007. "A Study of Planning and Implementation Stages in Electronic Commerce Adoption and Evaluation: The Case of Australian Smes," *Contemporary Management Research* (3:1), pp. 83-100.
- Mehrtens, J., Cragg, P.B., and Mills, A.M. 2001. "A Model of Internet Adoption by Smes," *Information & Management* (39:3), pp. 165-176.
- Miles, M.B., and Huberman, A.M. 1984. *Qualitative Data Analysis: A Sourcebook of New Methods*. Beverly Hills, Calif: Sage Publications.
- Osterwalder, A., Pigneur, Y., and Clark, T. 2010. *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Hoboken, NJ: John Wiley & Sons.
- Palvia, S.C.J. 2008. "Challenges for Small Enterprises in the Sourcing Life Cycle: Evidence from Offshoring to India," *Journal of Information Technology Case and Application Research* (10:4), p. 75.
- Poon, S., and Swatman, P.M.C. 1997. "Small Business Use of the Internet," *International Marketing Review* (14:5), pp. 385-402.
- Ramdani, B., Kawalek, P., and Lorenzo, O. 2009. "Predicting Smes' Adoption of Enterprise Systems," *Journal of Enterprise Information Management* (22:1/2), pp. 10-24.
- Sushil, B., Leena, J., and Sandeep, J. 2010. "An Approach for Investigating Perspective of Cloud Software-as-a-Service (SaaS)," *International Journal of Computer Applications* (10:2), pp. 44-47.
- Taylor, M., and Murphy, A. 2004. "Smes and E-Business," *Journal of Small Business and Enterprise Development* (11:3), pp. 280-289.
- Waters, B. 2005. "Software as a Service: A Look at the Customer Benefits," *Journal of Digital Asset Management* (1:1), pp. 32-39.
- Xin, M., and Levina, N. 2008. "Software-as-a-Service Model: Elaborating Client-Side Adoption Factors," *Proceedings of the 29th International Conference on Information Systems, R. Boland, M. Limayem, B. Pentland, (eds), Paris, France*.
- Yin, R.K. 1994. *Case Study Research: Design and Methods*, (Second ed.). Thousand Oaks, CA: Sage.
- Yin, R.K. 2009. *Case Study Research: Design and Methods*, (Fourth ed.). Sage Publications Inc.

ACKNOWLEDGEMENTS

This research was carried out as part of the activities of, and funded by, the Smart Services Cooperative Research Centre (CRC) through the Australian Government's CRC Programme (Department of Innovation, Industry, Science and Research).

COPYRIGHT

Venkatachalam, Felt, Rosemann and Mathews © 2013. The authors assign to ACIS and educational and non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to ACIS to publish this document in full in the Conference Papers and Proceedings. Those documents may be published on the World Wide Web, CD-ROM, in printed form, and on mirror sites on the World Wide Web. Any other usage is prohibited without the express permission of the authors.